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## SEQUENCE LISTING

<110> Festersen, Rikke Monica  
 Nielsen, Anders Viksoe  
 Joergensen, Christel Thea  
 Christensen, Lars Lehmann Hylling

<120> Mashing Process

<130> 10429.204-US

<160> 20

<170> PatentIn version 3.3

<210> 1

<211> 332

<212> PRT

<213> Aspergillus aculeatus

<400> 1

Met Lys Leu Leu Asn Leu Leu Val Ala Ala Ala Ala Gly Ser Ala  
 1 5 10 15

Val Ala Ala Pro Thr His Glu His Thr Lys Arg Ala Ser Val Phe Glu  
 20 25 30

Trp Ile Gly Ser Asn Glu Ser Asp Ala Glu Phe Gly Thr Ala Ile Pro  
 35 40 45

Gly Thr Trp Gly Ile Asp Tyr Ile Phe Pro Asp Thr Ser Ala Ile Ala  
 50 55 60

Thr Leu Val Ser Lys Gly Met Asn Ile Phe Arg Val Gln Phe Met Met  
 65 70 75 80

Glu Arg Leu Val Pro Asn Ser Met Thr Gly Ser Tyr Asp Asp Ala Tyr  
 85 90 95

Leu Asn Asn Leu Thr Thr Val Val Asn Ala Ile Ala Ala Ala Gly Val  
 100 105 110

His Ala Ile Val Asp Pro His Asn Tyr Gly Arg Tyr Asn Asn Glu Ile  
 115 120 125

Ile Ser Ser Thr Ala Asp Phe Gln Thr Phe Trp Gln Asn Leu Ala Gly  
 130 135 140

Gln Phe Lys Asp Asn Asp Leu Val Ile Phe Asp Thr Asn Asn Glu Tyr  
145 150 155 160

Asn Thr Met Asp Gln Thr Leu Val Leu Asp Leu Asn Gln Ala Ala Ile  
165 170 175

Asp Gly Ile Arg Ala Ala Gly Ala Thr Ser Gln Tyr Ile Phe Ala Glu  
180 185 190

Gly Asn Ser Trp Ser Gly Ala Trp Thr Trp Ala Asp Ile Asn Asp Asn  
195 200 205

Met Lys Ala Leu Thr Asp Pro Gln Asp Lys Leu Val Tyr Glu Met His  
210 215 220

Gln Tyr Leu Asp Ser Asp Gly Ser Gly Thr Ser Gly Val Cys Val Ser  
225 230 235 240

Glu Thr Ile Gly Ala Glu Arg Leu Gln Ala Ala Thr Gln Trp Leu Lys  
245 250 255

Asp Asn Gly Lys Val Asp Ile Leu Gly Glu Tyr Ala Gly Gly Ala Asn  
260 265 270

Asp Val Cys Arg Thr Ala Ile Ala Gly Met Leu Glu Tyr Met Ala Asn  
275 280 285

Asn Thr Asp Val Trp Lys Gly Ala Val Trp Trp Thr Ala Gly Pro Trp  
290 295 300

Trp Ala Asp Tyr Met Phe Ser Met Glu Pro Pro Ser Gly Pro Ala Tyr  
305 310 315 320

Ser Gly Met Leu Asp Val Leu Glu Pro Tyr Leu Gly  
325 330

<210> 2  
<211> 238  
<212> PRT  
<213> *Aspergillus aculeatus*

<400> 2

Met Lys Leu Ser Leu Leu Ser Leu Ala Thr Leu Ala Ser Ala Ala Ser

1	5	10	15
Leu Gln Arg Arg Ser Asp Phe Cys Gly Gln Trp Asp Thr Ala Thr Ala	20	25	30
Gly Asp Phe Thr Leu Tyr Asn Asp Leu Trp Gly Glu Ser Ala Gly Thr	35	40	45
Gly Ser Gln Cys Thr Gly Val Asp Ser Tyr Ser Gly Asp Thr Ile Ala	50	55	60
Trp His Thr Ser Trp Ser Trp Ser Gly Gly Ser Ser Ser Val Lys Ser	65	70	75
Tyr Val Asn Ala Ala Leu Thr Phe Thr Pro Thr Gln Leu Asn Cys Ile	85	90	95
Ser Ser Ile Pro Thr Thr Trp Lys Trp Ser Tyr Ser Gly Ser Ser Ile	100	105	110
Val Ala Asp Val Ala Tyr Asp Thr Phe Leu Ala Glu Thr Ala Ser Gly	115	120	125
Ser Ser Lys Tyr Glu Ile Met Val Trp Leu Ala Ala Leu Gly Gly Ala	130	135	140
Gly Pro Ile Ser Ser Thr Gly Ser Thr Ile Ala Thr Pro Thr Ile Ala	145	150	155
Gly Val Asn Trp Lys Leu Tyr Ser Gly Pro Asn Gly Asp Thr Thr Val	165	170	175
Tyr Ser Phe Val Ala Asp Ser Thr Thr Glu Ser Phe Ser Gly Asp Leu	180	185	190
Asn Asp Phe Phe Thr Tyr Leu Val Asp Asn Glu Gly Val Ser Asp Glu	195	200	205
Leu Tyr Leu Thr Thr Leu Glu Ala Gly Thr Glu Pro Phe Thr Gly Ser	210	215	220
Asn Ala Lys Leu Thr Val Ser Glu Tyr Ser Ile Ser Ile Glu	225	230	235

<210> 3  
 <211> 435  
 <212> PRT  
 <213> Humicola insolens

<400> 3

Met Ala Arg Gly Thr Ala Leu Leu Gly Leu Thr Ala Leu Leu Leu Gly  
 1 5 10 15

Leu Val Asn Gly Gln Lys Pro Gly Glu Thr Lys Glu Val His Pro Gln  
 20 25 30

Leu Thr Thr Phe Arg Cys Thr Lys Arg Gly Gly Cys Lys Pro Ala Thr  
 35 40 45

Asn Phe Ile Val Leu Asp Ser Leu Ser His Pro Ile His Arg Ala Glu  
 50 55 60

Gly Leu Gly Pro Gly Gly Cys Gly Asp Trp Gly Asn Pro Pro Pro Lys  
 65 70 75 80

Asp Val Cys Pro Asp Val Glu Ser Cys Ala Lys Asn Cys Ile Met Glu  
 85 90 95

Gly Ile Pro Asp Tyr Ser Gln Tyr Gly Val Thr Thr Asn Gly Thr Ser  
 100 105 110

Leu Arg Leu Gln His Ile Leu Pro Asp Gly Arg Val Pro Ser Pro Arg  
 115 120 125

Val Tyr Leu Leu Asp Lys Thr Lys Arg Arg Tyr Glu Met Leu His Leu  
 130 135 140

Thr Gly Phe Glu Phe Thr Phe Asp Val Asp Ala Thr Lys Leu Pro Cys  
 145 150 155 160

Gly Met Asn Ser Ala Leu Tyr Leu Ser Glu Met His Pro Thr Gly Ala  
 165 170 175

Lys Ser Lys Tyr Asn Pro Gly Gly Ala Tyr Tyr Gly Thr Gly Tyr Cys  
 180 185 190

Asp Ala Gln Cys Phe Val Thr Pro Phe Ile Asn Gly Leu Gly Asn Ile  
 195 200 205

Glu Gly Lys Gly Ser Cys Cys Asn Glu Met Asp Ile Trp Glu Ala Asn  
 210 215 220

Ser Arg Ala Ser His Val Ala Pro His Thr Cys Asn Lys Lys Gly Leu  
 225 230 235 240

Tyr Leu Cys Glu Gly Glu Glu Cys Ala Phe Glu Gly Val Cys Asp Lys  
 245 250 255

Asn Gly Cys Gly Trp Asn Asn Tyr Arg Val Asn Val Thr Asp Tyr Tyr  
 260 265 270

Gly Arg Gly Glu Glu Phe Lys Val Asn Thr Leu Lys Pro Phe Thr Val  
 275 280 285

Val Thr Gln Phe Leu Ala Asn Arg Arg Gly Lys Leu Glu Lys Ile His  
 290 295 300

Arg Phe Tyr Val Gln Asp Gly Lys Val Ile Glu Ser Phe Tyr Thr Asn  
 305 310 315 320

Lys Glu Gly Val Pro Tyr Thr Asn Met Ile Asp Asp Glu Phe Cys Glu  
 325 330 335

Ala Thr Gly Ser Arg Lys Tyr Met Glu Leu Gly Ala Thr Gln Gly Met  
 340 345 350

Gly Glu Ala Leu Thr Arg Gly Met Val Leu Ala Met Ser Ile Trp Trp  
 355 360 365

Asp Gln Gly Gly Asn Met Glu Trp Leu Asp His Gly Glu Ala Gly Pro  
 370 375 380

Cys Ala Lys Gly Glu Gly Ala Pro Ser Asn Ile Val Gln Val Glu Pro  
 385 390 395 400

Phe Pro Glu Val Thr Tyr Thr Asn Leu Arg Trp Gly Glu Ile Gly Ser  
 405 410 415

Thr Tyr Gln Glu Val Gln Lys Pro Lys Pro Lys Pro Gly His Gly Pro

420

425

430

Arg Ser Asp  
435

&lt;210&gt; 4

&lt;211&gt; 254

&lt;212&gt; PRT

&lt;213&gt; Humicola insolens

&lt;400&gt; 4

Met Leu Lys Ser Ala Leu Leu Leu Gly Pro Ala Ala Val Ser Val Gln  
1 5 10 15

Ser Ala Ser Ile Pro Thr Ile Pro Ala Asn Leu Glu Pro Arg Gln Ile  
20 25 30

Arg Ser Leu Cys Glu Leu Tyr Gly Tyr Trp Ser Gly Asn Gly Tyr Glu  
35 40 45

Leu Leu Asn Asn Leu Trp Gly Lys Asp Thr Ala Thr Ser Gly Trp Gln  
50 55 60

Cys Thr Tyr Leu Asp Gly Thr Asn Asn Gly Gly Ile Gln Trp Ser Thr  
65 70 75 80

Ala Trp Glu Trp Gln Gly Ala Pro Asp Asn Val Lys Ser Tyr Pro Tyr  
85 90 95

Val Gly Lys Gln Ile Gln Arg Gly Arg Lys Ile Ser Asp Ile Asn Ser  
100 105 110

Met Arg Thr Ser Val Ser Trp Thr Tyr Asp Arg Thr Asp Ile Arg Ala  
115 120 125

Asn Val Ala Tyr Asp Val Phe Thr Ala Arg Asp Pro Asp His Pro Asn  
130 135 140

Trp Gly Gly Asp Tyr Glu Leu Met Ile Trp Leu Ala Arg Tyr Gly Gly  
145 150 155 160

Ile Tyr Pro Ile Gly Thr Phe His Ser Gln Val Asn Leu Ala Gly Arg  
165 170 175

Thr Trp Asp Leu Trp Thr Gly Tyr Asn Gly Asn Met Arg Val Tyr Ser  
180 185 190

Phe Leu Pro Pro Ser Gly Asp Ile Arg Asp Phe Ser Cys Asp Ile Lys  
195 200 205

Asp Phe Phe Asn Tyr Leu Glu Arg Asn His Gly Tyr Pro Ala Arg Glu  
210 215 220

Gln Asn Leu Ile Val Tyr Gln Val Gly Thr Glu Cys Phe Thr Gly Gly  
225 230 235 240

Pro Ala Arg Phe Thr Cys Arg Asp Phe Arg Ala Asp Leu Trp  
245 250

<210> 5  
<211> 388  
<212> PRT  
<213> Humicola insolens

<400> 5

Met Lys His Ser Val Leu Ala Gly Leu Phe Ala Thr Gly Ala Leu Ala  
1 5 10 15

Gln Gly Gly Ala Trp Gln Gln Cys Gly Gly Val Gly Phe Ser Gly Ser  
20 25 30

Thr Ser Cys Val Ser Gly Tyr Thr Cys Val Tyr Leu Asn Asp Trp Tyr  
35 40 45

Ser Gln Cys Gln Pro Gln Pro Thr Thr Leu Arg Thr Thr Thr Thr Pro  
50 55 60

Gly Ala Thr Ser Thr Thr Arg Ser Ala Pro Ala Ala Thr Ser Thr Thr  
65 70 75 80

Pro Ala Lys Gly Lys Phe Lys Trp Phe Gly Ile Asn Gln Ser Cys Ala  
85 90 95

Glu Phe Gly Lys Gly Glu Tyr Pro Gly Leu Trp Gly Lys His Phe Thr  
100 105 110

Phe Pro Ser Thr Ser Ser Ile Gln Thr His Ile Asn Asp Gly Phe Asn

115							120								125
Met	Phe	Arg	Val	Ala	Phe	Ser	Met	Glu	Arg	Leu	Ala	Pro	Asn	Gln	Leu
130						135					140				
Asn	Ala	Ala	Phe	Asp	Ala	Asn	Tyr	Leu	Arg	Asn	Leu	Thr	Glu	Thr	Val
145					150					155					160
Asn	Phe	Ile	Thr	Gly	Lys	Gly	Lys	Tyr	Ala	Met	Leu	Asp	Pro	His	Asn
				165					170					175	
Phe	Gly	Arg	Tyr	Tyr	Glu	Arg	Ile	Ile	Thr	Asp	Lys	Ala	Ala	Phe	Ala
			180					185					190		
Ser	Phe	Phe	Thr	Lys	Leu	Ala	Thr	His	Phe	Ala	Ser	Asn	Pro	Leu	Val
			195				200					205			
Val	Phe	Asp	Thr	Asn	Asn	Glu	Tyr	His	Asp	Met	Asp	Gln	Gln	Leu	Val
210						215					220				
Phe	Asp	Leu	Asn	Gln	Ala	Ala	Ile	Asp	Ala	Ile	Arg	Ala	Ala	Gly	Ala
225					230					235					240
Thr	Ser	Gln	Tyr	Ile	Met	Val	Glu	Gly	Asn	Ser	Trp	Thr	Gly	Ala	Trp
				245					250					255	
Thr	Trp	Asn	Val	Thr	Asn	Asn	Asn	Leu	Ala	Ala	Leu	Arg	Asp	Pro	Glu
			260					265					270		
Asn	Lys	Leu	Val	Tyr	Gln	Met	His	Gln	Tyr	Leu	Asp	Ser	Asp	Gly	Ser
		275					280					285			
Gly	Thr	Ser	Thr	Ala	Cys	Val	Ser	Thr	Gln	Val	Gly	Leu	Gln	Arg	Val
290						295					300				
Ile	Gly	Ala	Thr	Asn	Trp	Leu	Arg	Gln	Asn	Gly	Lys	Val	Gly	Leu	Leu
305					310					315					320
Gly	Glu	Phe	Ala	Gly	Gly	Ala	Asn	Ser	Val	Cys	Gln	Gln	Ala	Ile	Glu
				325					330					335	
Gly	Met	Leu	Thr	His	Leu	Gln	Glu	Asn	Ser	Asp	Val	Trp	Thr	Gly	Ala
			340					345					350		



Leu Trp Trp Ala Gly Gly Pro Trp Trp Gly Asp Tyr Ile Tyr Ser Phe  
 355 360 365

Glu Pro Pro Ser Gly Ile Gly Tyr Thr Tyr Tyr Asn Ser Leu Leu Lys  
 370 375 380

Lys Tyr Val Pro  
 385

<210> 6  
 <211> 305  
 <212> PRT  
 <213> Humicola insolens

<400> 6

Met Arg Ser Ser Pro Leu Leu Arg Ser Ala Val Val Ala Ala Leu Pro  
 1 5 10 15

Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr Trp Asp Cys  
 20 25 30

Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val Asn Gln Pro  
 35 40 45

Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp Phe Asp Ala  
 50 55 60

Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys Ala Asp Gln  
 65 70 75 80

Thr Pro Trp Ala Val Asn Asp Asp Phe Ala Leu Gly Phe Ala Ala Thr  
 85 90 95

Ser Ile Ala Gly Ser Asn Glu Ala Gly Trp Cys Cys Ala Cys Tyr Glu  
 100 105 110

Leu Thr Phe Thr Ser Gly Pro Val Ala Gly Lys Lys Met Val Val Gln  
 115 120 125

Ser Thr Ser Thr Gly Gly Asp Leu Gly Ser Asn His Phe Asp Leu Asn  
 130 135 140

Ile Pro Gly Gly Gly Val Gly Ile Phe Asp Gly Cys Thr Pro Gln Phe  
 145 150 155 160

Gly Gly Leu Pro Gly Gln Arg Tyr Gly Gly Ile Ser Ser Arg Asn Glu  
 165 170 175

Cys Asp Arg Phe Pro Asp Ala Leu Lys Pro Gly Cys Tyr Trp Arg Phe  
 180 185 190

Asp Trp Phe Lys Asn Ala Asp Asn Pro Ser Phe Ser Phe Arg Gln Val  
 195 200 205

Gln Cys Pro Ala Glu Leu Val Ala Arg Thr Gly Cys Arg Arg Asn Asp  
 210 215 220

Asp Gly Asn Phe Pro Ala Val Gln Ile Pro Ser Ser Ser Thr Ser Ser  
 225 230 235 240

Pro Val Asn Gln Pro Thr Ser Thr Ser Thr Thr Ser Thr Ser Thr Thr  
 245 250 255

Ser Ser Pro Pro Val Gln Pro Thr Thr Pro Ser Gly Cys Thr Ala Glu  
 260 265 270

Arg Trp Ala Gln Cys Gly Gly Asn Gly Trp Ser Gly Cys Thr Thr Cys  
 275 280 285

Val Ala Gly Ser Thr Cys Thr Lys Ile Asn Asp Trp Tyr His Gln Cys  
 290 295 300

Leu  
 305

<210> 7  
 <211> 335  
 <212> PRT  
 <213> *Thermoascus aurantiacus*

<400> 7

Met Lys Leu Gly Ser Leu Val Leu Ala Leu Ser Ala Ala Arg Leu Thr  
 1 5 10 15

Leu Ser Ala Pro Leu Ala Asp Arg Lys Gln Glu Thr Lys Arg Ala Lys  
 20 25 30

Val Phe Gln Trp Phe Gly Ser Asn Glu Ser Gly Ala Glu Phe Gly Ser  
 35 40 45

Gln Asn Leu Pro Gly Val Glu Gly Lys Asp Tyr Ile Trp Pro Asp Pro  
 50 55 60

Asn Thr Ile Asp Thr Leu Ile Ser Lys Gly Met Asn Ile Phe Arg Val  
 65 70 75 80

Pro Phe Met Met Glu Arg Leu Val Pro Asn Ser Met Thr Gly Ser Pro  
 85 90 95

Asp Pro Asn Tyr Leu Ala Asp Leu Ile Ala Thr Val Asn Ala Ile Thr  
 100 105 110

Gln Lys Gly Ala Tyr Ala Val Val Asp Pro His Asn Tyr Gly Arg Tyr  
 115 120 125

Tyr Asn Ser Ile Ile Ser Ser Pro Ser Asp Phe Gln Thr Phe Trp Lys  
 130 135 140

Thr Val Ala Ser Gln Phe Ala Ser Asn Pro Leu Val Ile Phe Asp Thr  
 145 150 155 160

Asn Asn Glu Tyr His Asp Met Asp Gln Thr Leu Val Leu Asn Leu Asn  
 165 170 175

Gln Ala Ala Ile Asp Gly Ile Arg Ser Ala Gly Ala Thr Ser Gln Tyr  
 180 185 190

Ile Phe Val Glu Gly Asn Ser Trp Thr Gly Ala Trp Thr Trp Thr Asn  
 195 200 205

Val Asn Asp Asn Met Lys Ser Leu Thr Asp Pro Ser Asp Lys Ile Ile  
 210 215 220

Tyr Glu Met His Gln Tyr Leu Asp Ser Asp Gly Ser Gly Thr Ser Ala  
 225 230 235 240

Thr Cys Val Ser Ser Thr Ile Gly Gln Glu Arg Ile Thr Ser Ala Thr  
 245 250 255

Gln Trp Leu Arg Ala Asn Gly Lys Lys Gly Ile Ile Gly Glu Phe Ala  
260 265 270

Gly Gly Ala Asn Asp Val Cys Glu Thr Ala Ile Thr Gly Met Leu Asp  
275 280 285

Tyr Met Ala Gln Asn Thr Asp Val Trp Thr Gly Ala Ile Trp Trp Ala  
290 295 300

Ala Gly Pro Trp Trp Gly Asp Tyr Ile Phe Ser Met Glu Pro Asp Asn  
305 310 315 320

Gly Ile Ala Tyr Gln Gln Ile Leu Pro Ile Leu Thr Pro Tyr Leu  
325 330 335

<210> 8  
<211> 327  
<212> PRT  
<213> *Aspergillus aculeatus*

<400> 8

Met Val Gln Ile Lys Ala Ala Ala Leu Ala Val Leu Phe Ala Ser Asn  
1 5 10 15

Val Leu Ser Asn Pro Ile Glu Pro Arg Gln Ala Ser Val Ser Ile Asp  
20 25 30

Ala Lys Phe Lys Ala His Gly Lys Lys Tyr Leu Gly Thr Ile Gly Asp  
35 40 45

Gln Tyr Thr Leu Asn Lys Asn Ala Lys Thr Pro Ala Ile Ile Lys Ala  
50 55 60

Asp Phe Gly Gln Leu Thr Pro Glu Asn Ser Met Lys Trp Asp Ala Thr  
65 70 75 80

Glu Pro Asn Arg Gly Gln Phe Ser Phe Ser Gly Ser Asp Tyr Leu Val  
85 90 95

Asn Phe Ala Gln Ser Asn Gly Lys Leu Ile Arg Gly His Thr Leu Val  
100 105 110

Trp His Ser Gln Leu Pro Ser Trp Val Gln Ser Ile Ser Asp Lys Asn

115		120		125
Thr Leu Ile Gln Val Met Gln Asn His Ile Thr Thr Val Met Gln Arg				
130		135		140
Tyr Lys Gly Lys Val Tyr Ala Trp Asp Val Val Asn Glu Ile Phe Asn				
145		150		155
				160
Glu Asp Gly Ser Leu Cys Gln Ser His Phe Tyr Asn Val Ile Gly Glu				
		165		170
				175
Asp Tyr Val Arg Ile Ala Phe Glu Thr Ala Arg Ala Val Asp Pro Asn				
		180		185
				190
Ala Lys Leu Tyr Ile Asn Asp Tyr Asn Leu Asp Ser Ala Ser Tyr Pro				
		195		200
				205
Lys Leu Thr Gly Leu Val Asn His Val Lys Lys Trp Val Ala Ala Gly				
		210		215
				220
Val Pro Ile Asp Gly Ile Gly Ser Gln Thr His Leu Ser Ala Gly Ala				
		225		230
				235
				240
Gly Ala Ala Val Ser Gly Ala Leu Asn Ala Leu Ala Gly Ala Gly Thr				
		245		250
				255
Lys Glu Val Ala Ile Thr Glu Leu Asp Ile Ala Gly Ala Ser Ser Thr				
		260		265
				270
Asp Tyr Val Asn Val Val Lys Ala Cys Leu Asn Gln Pro Lys Cys Val				
		275		280
				285
Gly Ile Thr Val Trp Gly Ser Ser Asp Pro Asp Ser Trp Arg Ser Ser				
		290		295
				300
Ser Ser Pro Leu Leu Phe Asp Ser Asn Tyr Asn Pro Lys Ala Ala Tyr				
		305		310
				315
				320
Thr Ala Ile Ala Asn Ala Leu				
		325		

<210> 9  
 <211> 406

<212> PRT

<213> *Aspergillus aculeatus*

<400> 9

Met Val Gly Leu Leu Ser Ile Thr Ala Ala Leu Ala Ala Thr Val Leu  
1 5 10 15

Pro Asn Ile Val Ser Ala Val Gly Leu Asp Gln Ala Ala Val Ala Lys  
20 25 30

Gly Leu Gln Tyr Phe Gly Thr Ala Thr Asp Asn Pro Glu Leu Thr Asp  
35 40 45

Ile Pro Tyr Val Thr Gln Leu Asn Asn Thr Ala Asp Phe Gly Gln Ile  
50 55 60

Thr Pro Gly Asn Ser Met Lys Trp Asp Ala Thr Glu Pro Ser Gln Gly  
65 70 75 80

Thr Phe Thr Phe Thr Lys Gly Asp Val Ile Ala Asp Leu Ala Glu Gly  
85 90 95

Asn Gly Gln Tyr Leu Arg Cys His Thr Leu Val Trp Tyr Asn Gln Leu  
100 105 110

Pro Ser Trp Val Thr Ser Gly Thr Trp Thr Asn Ala Thr Leu Thr Ala  
115 120 125

Ala Leu Lys Asn His Ile Thr Asn Val Val Ser His Tyr Lys Gly Lys  
130 135 140

Cys Leu His Trp Asp Val Val Asn Glu Ala Leu Asn Asp Asp Gly Thr  
145 150 155 160

Tyr Arg Thr Asn Ile Phe Tyr Thr Thr Ile Gly Glu Ala Tyr Ile Pro  
165 170 175

Ile Ala Phe Ala Ala Ala Ala Ala Ala Asp Pro Asp Ala Lys Leu Phe  
180 185 190

Tyr Asn Asp Tyr Asn Leu Glu Tyr Gly Gly Ala Lys Ala Ala Ser Ala  
195 200 205

Arg Ala Ile Val Gln Leu Val Lys Asn Ala Gly Ala Lys Ile Asp Gly  
 210 215 220

Val Gly Leu Gln Ala His Phe Ser Val Gly Thr Val Pro Ser Thr Ser  
 225 230 235 240

Ser Leu Val Ser Val Leu Gln Ser Phe Thr Ala Leu Gly Val Glu Val  
 245 250 255

Ala Tyr Thr Glu Ala Asp Val Arg Ile Leu Leu Pro Thr Thr Ala Thr  
 260 265 270

Thr Leu Ala Gln Gln Ser Ser Asp Phe Gln Ala Leu Val Gln Ser Cys  
 275 280 285

Val Gln Thr Thr Gly Cys Val Gly Phe Thr Ile Trp Asp Trp Thr Asp  
 290 295 300

Lys Tyr Ser Trp Val Pro Ser Thr Phe Ser Gly Tyr Gly Ala Ala Leu  
 305 310 315 320

Pro Trp Asp Glu Asn Leu Val Lys Lys Pro Ala Tyr Asn Gly Leu Leu  
 325 330 335

Ala Gly Met Gly Val Thr Val Thr Thr Thr Thr Thr Thr Thr Ala  
 340 345 350

Thr Ala Thr Gly Lys Thr Thr Thr Thr Thr Gly Ala Thr Ser Thr  
 355 360 365

Gly Thr Thr Ala Ala His Trp Gly Gln Cys Gly Gly Leu Asn Trp Ser  
 370 375 380

Gly Pro Thr Ala Cys Ala Thr Gly Tyr Thr Cys Thr Tyr Val Asn Asp  
 385 390 395 400

Tyr Tyr Ser Gln Cys Leu  
 405

<210> 10  
 <211> 231  
 <212> PRT  
 <213> Aspergillus aculeatus

<400> 10

Met Ala Arg Leu Ser Gln Phe Leu Leu Ala Cys Ala Leu Ala Val Lys  
1 5 10 15

Ala Phe Ala Ala Pro Ala Ala Glu Pro Val Glu Glu Arg Gly Pro Asn  
20 25 30

Phe Phe Ser Ala Leu Ala Gly Arg Ser Thr Gly Ser Ser Thr Gly Tyr  
35 40 45

Ser Asn Gly Tyr Tyr Tyr Ser Phe Trp Thr Asp Gly Ala Ser Gly Asp  
50 55 60

Val Glu Tyr Ser Asn Gly Ala Gly Gly Ser Tyr Ser Val Thr Trp Ser  
65 70 75 80

Ser Ala Ser Asn Phe Val Gly Gly Lys Gly Trp Asn Pro Gly Ser Ala  
85 90 95

His Asp Ile Thr Tyr Ser Gly Ser Trp Thr Ser Thr Gly Asn Ser Asn  
100 105 110

Ser Tyr Leu Ser Val Tyr Gly Trp Thr Thr Gly Pro Leu Val Glu Tyr  
115 120 125

Tyr Ile Leu Glu Asp Tyr Gly Glu Tyr Asn Pro Gly Ser Ala Gly Thr  
130 135 140

Tyr Lys Gly Ser Val Tyr Ser Asp Gly Ser Thr Tyr Asn Ile Tyr Thr  
145 150 155 160

Ala Thr Arg Thr Asn Ala Pro Ser Ile Gln Gly Thr Ala Thr Phe Thr  
165 170 175

Gln Tyr Trp Ser Ile Arg Gln Thr Lys Arg Val Gly Gly Thr Val Thr  
180 185 190

Thr Ala Asn His Phe Asn Ala Trp Ala Lys Leu Gly Met Asn Leu Gly  
195 200 205

Thr His Asn Tyr Gln Ile Val Ala Thr Glu Gly Tyr Tyr Ser Ser Gly  
210 215 220



Ser Ala Ser Ile Thr Val Ala  
225 230

<210> 11  
<211> 227  
<212> PRT  
<213> Humicola insolens

<400> 11

Met Val Ser Leu Lys Ser Val Leu Ala Ala Ala Thr Ala Val Ser Ser  
1 5 10 15

Ala Ile Ala Ala Pro Phe Asp Phe Val Pro Arg Asp Asn Ser Thr Ala  
20 25 30

Leu Gln Ala Arg Gln Val Thr Pro Asn Ala Glu Gly Trp His Asn Gly  
35 40 45

Tyr Phe Tyr Ser Trp Trp Ser Asp Gly Gly Gly Gln Val Gln Tyr Thr  
50 55 60

Asn Leu Glu Gly Ser Arg Tyr Gln Val Arg Trp Arg Asn Thr Gly Asn  
65 70 75 80

Phe Val Gly Gly Lys Gly Trp Asn Pro Gly Thr Gly Arg Thr Ile Asn  
85 90 95

Tyr Gly Gly Tyr Phe Asn Pro Gln Gly Asn Gly Tyr Leu Ala Val Tyr  
100 105 110

Gly Trp Thr Arg Asn Pro Leu Val Glu Tyr Tyr Val Ile Glu Ser Tyr  
115 120 125

Gly Thr Tyr Asn Pro Gly Ser Gln Ala Gln Tyr Lys Gly Thr Phe Tyr  
130 135 140

Thr Asp Gly Asp Gln Tyr Asp Ile Phe Val Ser Thr Arg Tyr Asn Gln  
145 150 155 160

Pro Ser Ile Asp Gly Thr Arg Thr Phe Gln Gln Tyr Trp Ser Ile Arg  
165 170 175

Lys Asn Lys Arg Val Gly Gly Ser Val Asn Met Gln Asn His Phe Asn

180                                      185                                      190  
 Ala Trp Gln Gln His Gly Met Pro Leu Gly Gln His Tyr Tyr Gln Val  
           195                                      200                                      205  
 Val Ala Thr Glu Gly Tyr Gln Ser Ser Gly Glu Ser Asp Ile Tyr Val  
           210                                      215                                      220  
 Gln Thr His  
 225  
 <210> 12  
 <211> 389  
 <212> PRT  
 <213> Humicola insolens  
 <400> 12  
 Met Arg Ser Ile Ala Leu Ala Leu Ala Ala Ala Pro Ala Val Leu Ala  
 1                                      5                                      10                                      15  
 Gln Ser Gln Leu Trp Gly Gln Cys Gly Gly Ile Gly Trp Asn Gly Pro  
           20                                      25                                      30  
 Thr Thr Cys Val Ser Gly Ala Thr Cys Thr Lys Ile Asn Asp Trp Tyr  
           35                                      40                                      45  
 His Gln Cys Leu Pro Gly Gly Asn Asn Asn Asn Pro Pro Pro Ala Thr  
           50                                      55                                      60  
 Thr Ser Gln Trp Thr Pro Pro Pro Ala Gln Thr Ser Ser Asn Pro Pro  
 65                                      70                                      75                                      80  
 Pro Thr Gly Gly Gly Gly Gly Asn Thr Leu His Glu Lys Phe Lys Ala  
           85                                      90                                      95  
 Arg Gly Lys Gln Tyr Phe Gly Thr Glu Ile Asp His Tyr His Leu Asn  
           100                                      105                                      110  
 Asn Asn Gln Leu Met Glu Ile Ala Arg Arg Glu Phe Gly Gln Ile Thr  
           115                                      120                                      125  
 His Glu Asn Ser Met Lys Trp Asp Ala Thr Glu Pro Ser Arg Gly Ser  
           130                                      135                                      140

Phe Ser Phe Gly Asn Ala Asp Arg Val Val Asp Trp Ala Thr Ser Asn  
 145 150 155 160

Gly Lys Leu Ile Arg Gly His Thr Leu Leu Trp His Ser Gln Leu Pro  
 165 170 175

Gln Trp Val Gln Asn Ile Asn Asp Arg Asn Thr Leu Thr Gln Val Ile  
 180 185 190

Glu Asn His Val Arg Thr Val Met Thr Arg Tyr Lys Gly Lys Ile Phe  
 195 200 205

His Tyr Asp Val Val Asn Glu Ile Leu Asp Glu Asn Gly Gly Leu Arg  
 210 215 220

Asn Ser Val Phe Ser Arg Val Leu Gly Glu Asp Phe Val Gly Ile Ala  
 225 230 235 240

Phe Arg Ala Ala Arg Ala Ala Asp Pro Asp Ala Lys Leu Tyr Ile Asn  
 245 250 255

Asp Tyr Asn Leu Asp Ser Ala Asn Tyr Ala Lys Thr Arg Gly Met Ile  
 260 265 270

Asn Leu Val Asn Lys Trp Val Ser Gln Gly Val Pro Ile Asp Gly Ile  
 275 280 285

Gly Thr Gln Ala His Leu Ala Gly Pro Gly Gly Trp Asn Pro Ala Ser  
 290 295 300

Gly Val Pro Ala Ala Leu Gln Ala Leu Ala Gly Ala Asn Val Lys Glu  
 305 310 315 320

Val Ala Ile Thr Glu Leu Asp Ile Gln Gly Ala Gly Ala Asn Asp Tyr  
 325 330 335

Val Thr Val Ala Asn Ala Cys Leu Asn Val Gln Lys Cys Val Gly Ile  
 340 345 350

Thr Val Trp Gly Val Ser Asp Arg Asp Thr Trp Arg Ser Asn Glu Asn  
 355 360 365

Pro Leu Leu Tyr Asp Arg Asp Tyr Arg Pro Lys Ala Ala Tyr Asn Ala  
 370 375 380

Leu Met Asn Ala Leu  
 385

<210> 13  
 <211> 375  
 <212> PRT  
 <213> Myceliophthora thermophila

<400> 13

Met His Leu Ser Ser Ser Leu Leu Leu Leu Ala Ala Leu Pro Leu Gly  
 1 5 10 15

Ile Ala Gly Lys Gly Lys Gly His Gly His Gly Pro His Thr Gly Leu  
 20 25 30

His Thr Leu Ala Lys Gln Ala Gly Leu Lys Tyr Phe Gly Ser Ala Thr  
 35 40 45

Asp Ser Pro Gly Gln Arg Glu Arg Ala Gly Tyr Glu Asp Lys Tyr Ala  
 50 55 60

Gln Tyr Asp Gln Ile Met Trp Lys Ser Gly Glu Phe Gly Leu Thr Thr  
 65 70 75 80

Pro Thr Asn Gly Gln Lys Trp Leu Phe Thr Glu Pro Glu Arg Gly Val  
 85 90 95

Phe Asn Phe Thr Glu Gly Asp Ile Val Thr Asn Leu Ala Arg Lys His  
 100 105 110

Gly Phe Met Gln Arg Cys His Ala Leu Val Trp His Ser Gln Leu Ala  
 115 120 125

Pro Trp Val Glu Ser Thr Glu Trp Thr Pro Glu Glu Leu Arg Gln Val  
 130 135 140

Ile Val Asn His Ile Thr His Val Ala Gly Tyr Tyr Lys Gly Lys Cys  
 145 150 155 160

Tyr Ala Trp Asp Val Val Asn Glu Ala Leu Asn Glu Asp Gly Thr Tyr  
 165 170 175

Arg Glu Ser Val Phe Tyr Lys Val Leu Gly Glu Asp Tyr Ile Lys Leu  
180 185 190

Ala Phe Glu Thr Ala Ala Lys Val Asp Pro His Ala Lys Leu Tyr Tyr  
195 200 205

Asn Asp Tyr Asn Leu Glu Ser Pro Ser Ala Lys Thr Glu Gly Ala Lys  
210 215 220

Arg Ile Val Lys Met Leu Lys Asp Ala Gly Ile Arg Ile Asp Gly Val  
225 230 235 240

Gly Leu Gln Ala His Leu Val Ala Glu Ser His Pro Thr Leu Asp Glu  
245 250 255

His Ile Asp Ala Ile Lys Gly Phe Thr Glu Leu Gly Val Glu Val Ala  
260 265 270

Leu Thr Glu Leu Asp Ile Arg Leu Ser Ile Pro Ala Asn Ala Thr Asn  
275 280 285

Leu Ala Gln Gln Arg Glu Ala Tyr Lys Asn Val Val Gly Ala Cys Val  
290 295 300

Gln Val Arg Gly Cys Ile Gly Val Glu Ile Trp Asp Phe Tyr Asp Pro  
305 310 315 320

Phe Ser Trp Val Pro Ala Thr Phe Pro Gly Gln Gly Ala Pro Leu Leu  
325 330 335

Trp Phe Glu Asp Phe Ser Lys His Pro Ala Tyr Asp Gly Val Val Glu  
340 345 350

Ala Leu Thr Asn Arg Thr Thr Gly Gly Cys Lys Gly Lys Gly Lys Gly  
355 360 365

Lys Gly Lys Val Trp Lys Ala  
370 375

<210> 14  
<211> 226  
<212> PRT

<213> Myceliophthora thermophila

<400> 14

Met Val Thr Leu Thr Arg Leu Ala Val Ala Ala Ala Ala Met Ile Ser  
1 5 10 15

Ser Thr Gly Leu Ala Ala Pro Thr Pro Glu Ala Gly Pro Asp Leu Pro  
20 25 30

Asp Phe Glu Leu Gly Val Asn Asn Leu Ala Arg Arg Ala Leu Asp Tyr  
35 40 45

Asn Gln Asn Tyr Arg Thr Ser Gly Asn Val Asn Tyr Ser Pro Thr Asp  
50 55 60

Asn Gly Tyr Ser Val Ser Phe Ser Asn Ala Gly Asp Phe Val Val Gly  
65 70 75 80

Lys Gly Trp Arg Thr Gly Ala Thr Arg Asn Ile Thr Phe Ser Gly Ser  
85 90 95

Thr Gln His Thr Ser Gly Thr Val Leu Val Ser Val Tyr Gly Trp Thr  
100 105 110

Arg Asn Pro Leu Ile Glu Tyr Tyr Val Gln Glu Tyr Thr Ser Asn Gly  
115 120 125

Ala Gly Ser Ala Gln Gly Glu Lys Leu Gly Thr Val Glu Ser Asp Gly  
130 135 140

Gly Thr Tyr Glu Ile Trp Arg His Gln Gln Val Asn Gln Pro Ser Ile  
145 150 155 160

Glu Gly Thr Ser Thr Phe Trp Gln Tyr Ile Ser Asn Arg Val Ser Gly  
165 170 175

Gln Arg Pro Asn Gly Gly Thr Val Thr Leu Ala Asn His Phe Ala Ala  
180 185 190

Trp Gln Lys Leu Gly Leu Asn Leu Gly Gln His Asp Tyr Gln Val Leu  
195 200 205

Ala Thr Glu Gly Trp Gly Asn Ala Gly Gly Ser Ser Gln Tyr Thr Val

210

215

220

Ser Gly  
225

&lt;210&gt; 15

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; Thermomyces lanuginosus

&lt;400&gt; 15

Met Val Gly Phe Thr Pro Val Ala Leu Ala Ala Leu Ala Ala Thr Gly  
1 5 10 15

Ala Leu Ala Phe Pro Ala Gly Asn Ala Thr Glu Leu Glu Lys Arg Gln  
20 25 30

Thr Thr Pro Asn Ser Glu Gly Trp His Asp Gly Tyr Tyr Tyr Ser Trp  
35 40 45

Trp Ser Asp Gly Gly Ala Gln Ala Thr Tyr Thr Asn Leu Glu Gly Gly  
50 55 60

Thr Tyr Glu Ile Ser Trp Gly Asp Gly Gly Asn Leu Val Gly Gly Lys  
65 70 75 80

Gly Trp Asn Pro Gly Leu Asn Ala Arg Ala Ile His Phe Glu Gly Val  
85 90 95

Tyr Gln Pro Asn Gly Asn Ser Tyr Leu Ala Val Tyr Gly Trp Thr Arg  
100 105 110

Asn Pro Leu Val Glu Tyr Tyr Ile Val Glu Asn Phe Gly Thr Tyr Asp  
115 120 125

Pro Ser Ser Gly Ala Thr Asp Leu Gly Thr Val Glu Cys Asp Gly Ser  
130 135 140

Ile Tyr Arg Leu Gly Lys Thr Thr Arg Val Asn Ala Pro Ser Ile Asp  
145 150 155 160

Gly Thr Gln Thr Phe Asp Gln Tyr Trp Ser Val Arg Gln Asp Lys Arg  
165 170 175

Thr Ser Gly Thr Val Gln Thr Gly Cys His Phe Asp Ala Trp Ala Arg  
180 185 190

Ala Gly Leu Asn Val Asn Gly Asp His Tyr Tyr Gln Ile Val Ala Thr  
195 200 205

Glu Gly Tyr Phe Ser Ser Gly Tyr Ala Arg Ile Thr Val Ala Asp Val  
210 215 220

Gly  
225

<210> 16  
<211> 237  
<212> PRT  
<213> *Aspergillus aculeatus*  
<400> 16

Met Lys Ala Phe Tyr Phe Leu Ala Ser Leu Ala Gly Ala Ala Val Ala  
1 5 10 15

Gln Gln Thr Gln Leu Cys Asp Gln Tyr Ala Thr Tyr Thr Gly Ser Val  
20 25 30

Tyr Thr Ile Asn Asn Asn Leu Trp Gly Lys Asp Ala Gly Ser Gly Ser  
35 40 45

Gln Cys Thr Thr Val Asn Ser Ala Ser Ser Ala Gly Thr Ser Trp Ser  
50 55 60

Thr Lys Trp Asn Trp Ser Gly Gly Glu Asn Ser Val Lys Ser Tyr Ala  
65 70 75 80

Asn Ser Gly Leu Ser Phe Asn Lys Lys Leu Val Ser Gln Ile Ser Arg  
85 90 95

Ile Pro Thr Ala Ala Gln Trp Ser Tyr Asp Asn Thr Gly Ile Arg Ala  
100 105 110

Asp Val Ala Tyr Asp Leu Phe Thr Ala Ala Asp Ile Asn His Val Thr  
115 120 125

Trp Ser Gly Asp Tyr Glu Leu Met Ile Trp Leu Ala Arg Tyr Gly Gly



130	135	140
Val Gln Pro Leu Gly Ser Lys Ile Ala Thr Ala Thr Val Glu Gly Gln		
145	150	155 160
Thr Trp Glu Leu Trp Tyr Gly Val Asn Gly Ala Gln Lys Thr Tyr Ser		
	165	170 175
Phe Val Ala Pro Thr Pro Ile Thr Ser Phe Gln Gly Asp Val Asn Asp		
	180	185 190
Phe Phe Lys Tyr Leu Thr Gln Asn His Gly Phe Pro Ala Ser Ser Gln		
	195	200 205
Tyr Leu Ile Thr Leu Gln Phe Gly Thr Glu Pro Phe Thr Gly Gly Pro		
	210	215 220
Ala Thr Leu Thr Val Ser Asp Trp Ser Ala Ser Val Gln		
225	230	235

<210> 17  
 <211> 347  
 <212> PRT  
 <213> T. reesei

<220>  
 <221> PEPTIDE  
 <222> (1)..(347)

<400> 17

Met Lys Ala Asn Val Ile Leu Cys Leu Leu Ala Pro Leu Val Ala Ala
1 5 10 15
Leu Pro Thr Glu Thr Ile His Leu Asp Pro Glu Leu Ala Ala Leu Arg
20 25 30
Ala Asn Leu Thr Glu Arg Thr Ala Asp Leu Trp Asp Arg Gln Ala Ser
35 40 45
Gln Ser Ile Asp Gln Leu Ile Lys Arg Lys Gly Lys Leu Tyr Phe Gly
50 55 60
Thr Ala Thr Asp Arg Gly Leu Leu Gln Arg Glu Lys Asn Ala Ala Ile
65 70 75 80

Ile Gln Ala Asp Leu Gly Gln Val Thr Pro Glu Asn Ser Met Lys Trp  
 85 90 95

Gln Ser Leu Glu Asn Asn Gln Gly Gln Leu Asn Trp Gly Asp Ala Asp  
 100 105 110

Tyr Leu Val Asn Phe Ala Gln Gln Asn Gly Lys Ser Ile Arg Gly His  
 115 120 125

Thr Leu Ile Trp His Ser Gln Leu Pro Ala Trp Val Asn Asn Ile Asn  
 130 135 140

Asn Ala Asp Thr Leu Arg Gln Val Ile Arg Thr His Val Ser Thr Val  
 145 150 155 160

Val Gly Arg Tyr Lys Gly Lys Ile Arg Ala Trp Asp Val Val Asn Glu  
 165 170 175

Ile Phe Asn Glu Asp Gly Thr Leu Arg Ser Ser Val Phe Ser Arg Leu  
 180 185 190

Leu Gly Glu Glu Phe Val Ser Ile Ala Phe Arg Ala Ala Arg Asp Ala  
 195 200 205

Asp Pro Ser Ala Arg Leu Tyr Ile Asn Asp Tyr Asn Leu Asp Arg Ala  
 210 215 220

Asn Tyr Gly Lys Val Asn Gly Leu Lys Thr Tyr Val Ser Lys Trp Ile  
 225 230 235 240

Ser Gln Gly Val Pro Ile Asp Gly Ile Gly Ser Gln Ser His Leu Ser  
 245 250 255

Gly Gly Gly Gly Ser Gly Thr Leu Gly Ala Leu Gln Gln Leu Ala Thr  
 260 265 270

Val Pro Val Thr Glu Leu Ala Ile Thr Glu Leu Asp Ile Gln Gly Ala  
 275 280 285

Pro Thr Thr Asp Tyr Thr Gln Val Val Gln Ala Cys Leu Ser Val Ser  
 290 295 300

Lys Cys Val Gly Ile Thr Val Trp Gly Ile Ser Asp Lys Asp Ser Trp  
 305 310 315 320

Arg Ala Ser Thr Asn Pro Leu Leu Phe Asp Ala Asn Phe Asn Pro Lys  
 325 330 335

Pro Ala Tyr Asn Ser Ile Val Gly Ile Leu Gln  
 340 345

<210> 18  
 <211> 419  
 <212> PRT  
 <213> T.reesei

<220>  
 <221> PEPTIDE  
 <222> (1)..(419)

<400> 18

Met Asn Lys Pro Met Ser Ser Leu Leu Leu Ala Ala Thr Leu Leu Ala  
 1 5 10 15

Gly Gly Ser Ile Ala Gln Gln Thr Val Trp Gly Gln Cys Gly Gly Gln  
 20 25 30

Gly Trp Ser Gly Pro Thr Ser Cys Val Ala Gly Ser Ala Cys Ser Thr  
 35 40 45

Leu Asn Pro Tyr Tyr Ala Gln Cys Ile Pro Gly Ala Thr Thr Met Ser  
 50 55 60

Thr Thr Thr Lys Pro Thr Ser Val Ser Ala Ser Thr Thr Arg Ala Ser  
 65 70 75 80

Ala Thr Ser Ser Ala Thr Pro Pro Pro Ser Ser Gly Leu Thr Arg Phe  
 85 90 95

Ala Gly Val Asn Ile Ala Gly Phe Asp Phe Gly Cys Gly Thr Asp Gly  
 100 105 110

Thr Cys Val Thr Ser Lys Val Tyr Pro Pro Leu Lys Asn Tyr Ala Gly  
 115 120 125

Thr Asn Asn Tyr Pro Asp Gly Val Gly Gln Met Gln His Phe Val Asn  
130 135 140

Asp Asp Lys Leu Thr Ile Phe Arg Leu Pro Val Gly Trp Gln Tyr Leu  
145 150 155 160

Val Asn Asn Asn Leu Gly Gly Thr Leu Asp Ser Asn Asn Phe Gly Lys  
165 170 175

Tyr Asp Gln Leu Val Gln Ala Cys Leu Ser Leu Gly Val Tyr Cys Ile  
180 185 190

Val Asp Ile His Asn Tyr Ala Arg Trp Asn Gly Gly Ile Ile Gly Gln  
195 200 205

Gly Gly Pro Thr Asn Asp Gln Phe Thr Ser Leu Trp Ser Gln Leu Ala  
210 215 220

Gln Lys Tyr Ala Ser Gln Ser Lys Val Trp Phe Gly Ile Met Asn Glu  
225 230 235 240

Pro His Asp Val Asn Ile Asn Thr Trp Ala Thr Thr Val Gln Ala Val  
245 250 255

Val Thr Ala Ile Arg Asn Ala Gly Ala Thr Ser Gln Phe Ile Ser Leu  
260 265 270

Pro Gly Asn Asp Trp Gln Ser Ala Gly Ala Phe Ile Ser Asp Gly Ser  
275 280 285

Ala Ala Ala Leu Ser Gln Val Lys Asn Pro Asp Gly Ser Thr Pro Asn  
290 295 300

Leu Ile Phe Asp Leu His Lys Tyr Leu Asp Ser Asp Asn Ser Gly Thr  
305 310 315 320

His Ala Asp Cys Val Thr Asn Asn Val Asn Asp Ala Phe Ser Pro Val  
325 330 335

Ala Thr Trp Leu Arg Gln Asn Asn Arg Gln Ala Ile Leu Thr Glu Thr  
340 345 350

Gly Gly Gly Asn Thr Gln Ser Cys Ile Gln Tyr Leu Cys Gln Gln Phe

355                      360                      365  
 Gln Tyr Ile Asn Gln Asn Ser Asp Val Tyr Leu Gly Tyr Val Gly Trp  
       370                      375                      380  
 Gly Ala Gly Ser Phe Asp Ser Thr Tyr Ile Leu Thr Glu Thr Pro Thr  
 385                      390                      395                      400  
 Gly Ser Gly Ser Ser Trp Thr Asp Thr Ser Leu Val Ser Ser Cys Ile  
                     405                      410                      415

Ser Arg Lys

<210> 19  
 <211> 459  
 <212> PRT  
 <213> T.viride

<220>  
 <221> PEPTIDE  
 <222> (1)..(459)

<400> 19

Met Ala Pro Ser Val Thr Leu Pro Leu Thr Thr Ala Ile Leu Ala Ile  
 1                      5                      10                      15

Ala Arg Leu Val Ala Ala Gln Gln Pro Gly Thr Ser Thr Pro Glu Val  
                     20                      25                      30

His Pro Lys Leu Thr Thr Tyr Lys Cys Thr Lys Ser Gly Gly Cys Val  
                     35                      40                      45

Ala Gln Asp Thr Ser Val Val Leu Asp Trp Asn Tyr Arg Trp Met His  
       50                      55                      60

Asp Ala Asn Tyr Asn Ser Cys Thr Val Asn Gly Gly Val Asn Thr Thr  
 65                      70                      75                      80

Leu Cys Pro Asp Glu Ala Thr Cys Gly Lys Asn Cys Phe Ile Glu Gly  
                     85                      90                      95

Val Asp Tyr Ala Ala Ser Gly Val Thr Thr Ser Gly Ser Ser Leu Thr  
       100                      105                      110

Met Asn Gln Tyr Met Pro Ser Ser Ser Gly Gly Tyr Ser Ser Val Ser  
115 120 125

Pro Arg Leu Tyr Leu Leu Asp Ser Asp Gly Glu Tyr Val Met Leu Lys  
130 135 140

Leu Asn Gly Gln Glu Leu Ser Phe Asp Val Asp Leu Ser Ala Leu Pro  
145 150 155 160

Cys Gly Glu Asn Gly Ser Leu Tyr Leu Ser Gln Met Asp Glu Asn Gly  
165 170 175

Gly Ala Asn Gln Tyr Asn Thr Ala Gly Ala Asn Tyr Gly Ser Gly Tyr  
180 185 190

Cys Asp Ala Gln Cys Pro Val Gln Thr Trp Arg Asn Gly Thr Leu Asn  
195 200 205

Thr Ser His Gln Gly Phe Cys Cys Asn Glu Met Asp Ile Leu Glu Gly  
210 215 220

Asn Ser Arg Ala Asn Ala Leu Thr Pro His Ser Cys Thr Ala Thr Ala  
225 230 235 240

Cys Asp Ser Ala Gly Cys Gly Phe Asn Pro Tyr Gly Ser Gly Tyr Lys  
245 250 255

Ser Tyr Tyr Gly Pro Gly Asp Thr Val Asp Thr Ser Lys Thr Phe Thr  
260 265 270

Ile Ile Thr Gln Phe Asn Thr Asp Asn Gly Ser Pro Ser Gly Asn Leu  
275 280 285

Val Gly Ile Thr Arg Lys Tyr Gln Gln Asn Gly Val Asp Ile Pro Ser  
290 295 300

Ala Gln Pro Gly Gly Asp Thr Ile Ser Ser Cys Pro Ser Ala Ser Ala  
305 310 315 320

Tyr Gly Gly Leu Ala Thr Met Gly Lys Ala Leu Ser Ser Gly Met Val  
325 330 335

Leu Val Phe Ser Ile Trp Asn Asp Asn Ser Gln Tyr Met Asn Trp Leu  
 340 345 350

Asp Ser Gly Asn Ala Gly Pro Cys Ser Ser Thr Glu Gly Asn Pro Ser  
 355 360 365

Asn Ile Leu Ala Asn Asn Pro Asn Thr His Val Val Phe Ser Asn Ile  
 370 375 380

Arg Trp Gly Asp Ile Gly Ser Thr Thr Asn Ser Thr Ala Pro Pro Pro  
 385 390 395 400

Pro Pro Ala Ser Ser Thr Thr Phe Ser Thr Thr Arg Arg Ser Ser Thr  
 405 410 415

Thr Ser Ser Ser Pro Ser Cys Thr Gln Thr His Trp Gly Gln Cys Gly  
 420 425 430

Gly Ile Gly Tyr Ser Gly Cys Lys Thr Cys Thr Ser Gly Thr Thr Cys  
 435 440 445

Gln Tyr Ser Asn Asp Tyr Tyr Ser Gln Cys Leu  
 450 455

<210> 20  
 <211> 232  
 <212> PRT  
 <213> T.reesei

<220>  
 <221> PEPTIDE  
 <222> (1)..(232)

<400> 20

Met Lys Phe Leu Gln Val Leu Pro Ala Leu Ile Pro Ala Ala Leu Ala  
 1 5 10 15

Gln Thr Ser Cys Asp Gln Trp Ala Thr Phe Thr Gly Asn Gly Tyr Thr  
 20 25 30

Val Ser Asn Asn Leu Trp Gly Ala Ser Ala Gly Ser Gly Phe Gly Cys  
 35 40 45

Val Thr Ala Val Ser Leu Ser Gly Gly Ala His Ala Asp Trp Gln Trp  
 50 55 60

Ser Gly Gly Gln Asn Asn Val Lys Ser Tyr Gln Asn Ser Gln Ile Ala  
 65 70 75 80

Ile Pro Gln Lys Arg Thr Val Asn Ser Ile Ser Ser Met Pro Thr Thr  
 85 90 95

Ala Ser Trp Ser Tyr Ser Gly Ser Asn Ile Arg Ala Asn Val Ala Tyr  
 100 105 110

Asp Leu Phe Thr Ala Ala Asn Pro Asn His Val Thr Tyr Ser Gly Asp  
 115 120 125

Tyr Glu Leu Met Ile Trp Leu Gly Lys Tyr Gly Asp Ile Gly Pro Ile  
 130 135 140

Gly Ser Ser Gln Gly Thr Val Asn Val Gly Gly Gln Ser Trp Thr Leu  
 145 150 155 160

Tyr Tyr Gly Tyr Asn Gly Ala Met Gln Val Tyr Ser Phe Val Ala Gln  
 165 170 175

Thr Asn Thr Thr Asn Tyr Ser Gly Asp Val Lys Asn Phe Phe Asn Tyr  
 180 185 190

Leu Arg Asp Asn Lys Gly Tyr Asn Ala Ala Gly Gln Tyr Val Leu Ser  
 195 200 205

Tyr Gln Phe Gly Thr Glu Pro Phe Thr Gly Ser Gly Thr Leu Asn Val  
 210 215 220

Ala Ser Trp Thr Ala Ser Ile Asn  
 225 230